

Title (en)
ALKALINE EARTH METAL ION ADSORBENT, METHOD FOR PRODUCING SAME, AND ALKALINE EARTH METAL ION-CONTAINING LIQUID PROCESSING APPARATUS

Title (de)
ERDALKALIMETALLIONENADSORBENS, VERFAHREN ZU DESSEN HERSTELLUNG UND BEHANDLUNGSVORRICHTUNG FÜR ERDALKALIMETALLIONENHALTIGE FLÜSSIGKEIT

Title (fr)
AGENT D'ABSORPTION À BASE DE TERRES ALCALINES ET D'IONS MÉTALLIQUES, PROCÉDÉ DE FABRICATION DE CET AGENT, ET DISPOSITIF DE TRAITEMENT PAR LIQUIDE À TENEUR EN TERRES ALCALINES ET IONS MÉTALLIQUES

Publication
EP 3593899 A4 20210113 (EN)

Application
EP 18763923 A 20180301

Priority
• JP 2017043598 A 20170308
• JP 2018007735 W 20180301

Abstract (en)
[origin: EP3593899A1] Provided is a particulate alkaline earth metal ion adsorbent having a large adsorption capacity. The particulate alkaline earth metal ion adsorbent comprising: a potassium hydrogen dititanate hydrate represented by a chemical formula $K_{2-x}H_xO_{2+2x} \cdot nH_2O$, wherein x is 0.5 or more and 1.3 or less, and n is greater than 0; and no binder, wherein the particulate alkaline earth metal ion adsorbent has a particle size range of 150 μm or more and 1000 μm or less.

IPC 8 full level
B01J 20/06 (2006.01); **B01J 20/04** (2006.01); **B01J 20/28** (2006.01); **B01J 20/30** (2006.01); **B01J 39/10** (2006.01); **C01G 23/00** (2006.01); **C02F 1/28** (2006.01); **G21F 9/12** (2006.01)

CPC (source: EP KR US)
B01J 20/04 (2013.01 - US); **B01J 20/041** (2013.01 - EP); **B01J 20/06** (2013.01 - EP KR US); **B01J 20/28002** (2013.01 - KR); **B01J 20/28004** (2013.01 - EP KR US); **B01J 20/28016** (2013.01 - US); **B01J 20/3021** (2013.01 - EP KR US); **B01J 20/3028** (2013.01 - EP KR US); **B01J 20/3078** (2013.01 - EP KR US); **B01J 20/3085** (2013.01 - EP KR US); **B01J 20/3092** (2013.01 - EP); **B01J 39/10** (2013.01 - EP); **C01G 23/005** (2013.01 - EP); **C02F 1/281** (2013.01 - EP KR); **G21F 9/12** (2013.01 - EP KR US); **C01P 2002/72** (2013.01 - EP); **C01P 2004/50** (2013.01 - EP); **C01P 2004/60** (2013.01 - EP); **C01P 2006/12** (2013.01 - EP); **C02F 2101/006** (2013.01 - EP KR); **C02F 2103/08** (2013.01 - EP); **C02F 2209/40** (2013.01 - EP)

Citation (search report)
• [A] JP 2016187789 A 20161104 - KURITA WATER IND LTD
• [A] WO 9714652 A1 19970424 - ALLIED SIGNAL INC [US]
• [A] US 2016314864 A1 20161027 - MORI KOICHI [JP], et al
• See references of WO 2018163954A1

Cited by
EP3848116A4; US11890610B2

Designated contracting state (EPC)
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DOCDB simple family (publication)
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